

EXCESS MAIL NO. Em 508 444 879

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

#7

Applicant : HARD, et al.  
Ser. No. : 08/621,631  
Fil. Date : 26 March 1997  
For : RECOVERY OF METAL VALUES  
Examiner : Unknown  
Art Unit : Unknown

HONORABLE COMMISSIONER OF PATENTS  
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FORM PTO-1449  
INFORMATION DISCLOSURE STATEMENT BY APPLICANT(S)

## U.S. PATENT DOCUMENTS

Examiner Initial	Patent Number	Date	Name	Class/ Subclass	Filing Date	Enclosed
	2,767,047 ✓	Oct. 16, 1956	Wilhelm et al.	23-23	Oct. 20, 1953	Yes
	2,953,453 ✓	Sep. 20, 1960	Foos	75-121	Jun. 20, 1958	Yes
	2,962,372 ✓	Nov. 29, 1960	Foos et al.	75-121	Jan. 17, 1958	Yes
	3,117,833 ✓	Jan. 14, 1964	Pierret	23-19	Sep. 25, 1958	Yes
	3,300,297 ✓	Jan. 24, 1967	Field	75-24	May 26, 1964	Yes
	3,658,511 ✓	Apr. 25, 1972	Gustison	C22B 51/00	Dec. 22, 1969	Yes
	3,712,939 ✓	Jan. 23, 1973	Capps et al.	C22B 50/00	Mar. 29, 1971	Yes
	3,972,710 ✓	Aug. 3, 1976	Meyer	C22B 34/24	Jul. 9, 1975	Yes
	4,164,417 ✓	Aug. 14, 1979	Gustison	C22B 34/24; C22C 27/02	Apr. 28, 1978	Yes
	4,451,438 ✓	May 29, 1984	Floeter et al.	C01G 43/00; C01G 33/00; C01G 35/00; C01F 15/00	Sep. 29, 1982	Yes
	4,718,996 ✓	Jan. 12, 1988	Vanderpool et al.	C22B 34/36; C22B 50/00	Sep. 4, 1986	Yes
	4,808,384 ✓	Feb. 28, 1989	Vanderpool et al.	C01G 41/00	Dec. 21, 1987	Yes
	5,023,059 ✓	Jun. 11, 1991	Bielecki et al.	B01D 11/00	Nov. 2, 1988	Yes

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Examiner Initial	Patent Number	Date	Name	Class/ Subclass	Filing Date	Enclosed
<u>W</u>	5,084,253	Jan. 28, 1992	Pollock et al.	C01G 33/00; C22B 34/20	Nov. 13, 1989	Yes
<u>C</u>	5,437,848 ✓	Aug. 1, 1995	Hard	C01G 56/00; C01G 57/00	Jul. 10, 1992	Yes
<u>C</u>	5,492,680 ✓	Feb. 20, 1996	Odekirk	C01F 17/00	Aug. 4, 1994	Yes

## FOREIGN PATENT DOCUMENTS

Examiner Initial	Document Number	Date	Country	Class/ Subclass	Translation Yes No	Enclosed
<u>W</u>	<del>0 041 459</del>	<del>Jun. 1, 1981</del>	<del>European</del>	<del>C22B 34/24; C01G 33/00; C01G 35/00</del>	<del>Abstract</del>	<del>Yes</del>
<u>W</u>	<del>2 438 623</del>	<del>Jan. 23, 1980</del>	<del>France</del>	<del>C01B 15/047</del>	<del>Abstract</del>	<del>Yes</del>

## OTHER DOCUMENTS

(Including Author, Title, Date, Pertinent Pages, Etc.)

Examiner Initial	Document	Enclosed
<u>W</u>	<del>1. PCT Application No. WO 90/02823, published Mar. 22, 1990.</del>	<del>Yes</del>
<u>W</u>	<del>2. ✓ PCT Application No. WO 95/13985, published May 26, 1995.</del>	<del>Yes</del>
<u>W</u>	<del>3. PCT Int'l Appln. No. PCT/US97/04013 Search Report ~ mailed July 16, 1997.</del>	<del>Yes</del>
<u>W</u>	<del>4. PCT Application No. WO 94/01190, published Jan. 20, 1994.</del>	<del>Yes</del> <u>NO</u>
<u>W</u>	<del>5. PCT Int'l Appln. No. PCT/US97/04089 Search Report mailed August 12, 1997.</del>	<del>Yes</del>
<u>W</u>	<del>6. PCT Int'l Appln. No. PCT/US97/04088 Search Report mailed August 5, 1997.</del>	<del>Yes</del>
<u>W</u>	7. "Extractive metallurgy of niobium, tantalum and vanadium," by C.K. Gupta, pages 405-444	Yes

EXAMINER

DATE CONSIDERED

EDWARD A. MILLER  
PRIMARY EXAMINER  
ART UNIT 224

6-98

EXAMINER: Initial/citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.